Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Revision of Part 15 of the Commission's	)	ET Docket No. 98-153
Rules Regarding Ultra-Wideband	)	
Transmission Systems	)	

SIA REPLY COMMENTS TO
FURTHER NOTICE OF PROPOSED RULE MAKING

The Satellite Industry Association ("SIA") hereby replies to the comments submitted in response to the Commission's Memorandum Opinion and Order and Further Notice of Proposed Rulemaking in this proceeding.[1]

I. INTRODUCTION

SIA is a national trade association representing the leading U.S. satellite manufacturers, service providers, and launch service companies. SIA serves as an advocate for the commercial satellite industry on regulatory and policy issues common to its members. With its member companies providing a broad range of manufactured products and services, SIA represents the unified voice of the commercial satellite industry.[2]

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[1] *Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems,* Memorandum Opinion and Order and Further Notice of Proposed Rule Making, FCC 03-33, ET Docket No. 98-153 (rel. Mar. 12, 2003) ("MO&O and FNPRM").

[2] SIA Executive Members are: The Boeing Company; Globalstar, L.P.; Hughes Network Systems, Inc.; ICO Global Communications; Intelsat; Lockheed Martin Corp.; Loral Space & Communications Ltd.; Mobile Satellite Ventures; Northrop Grumman Corporation; PanAmSat Corporation; and SES Americom, Inc. SIA Associate Members are: Inmarsat, New Skies Satellites Inc, and Verestar Inc.

From the outset of this proceeding, SIA has supported the Commission's goal of facilitating the development of UWB technology. At the same time, SIA has urged the Commission to take into account the potential for UWB devices to interfere with fixed and mobile satellite systems.[3]

II. THE COMMISSION SHOULD NOT REOPEN ITS DECISION TO PRECLUDE USE OF VEHICULAR RADAR DEVICES IN THE 3.1 – 10.6 GHZ BAND

Certain commenters have argued that the Commission should once again revisit its decision to preclude operation of vehicular radars in the 3.1-10.6 GHz band and to permit their operation in accordance with standards applicable to hand-held devices.[4] The Commission should not, however, open this band to such uses.

In its previous filings in this docket, SIA has demonstrated that allowing UWB communications devices to operate at peak levels as high as 0 dBm/50 MHz in the 3.1-10.6 GHz band would expose FSS earth station receivers operating in the C-band to harmful interference.[5] The Commission has nonetheless permitted such uses, reasoning that the permitted hand-held and communication-type devices would likely have low peak to average EIRP differences and, consequently, a low probability of interference with FSS earth stations. The SIA has urged reconsideration of this conclusion.[6] Allowing use of vehicular radars in this band, however, would dramatically increase the risk of harmful interference, as such systems use lower PRF levels where the peak EIRP is significantly higher than the average EIRP, resulting in increased interference into the earth station receiver. Indeed, the Commission itself has concluded that

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[3] Comments of the Satellite Industry Association (filed September 12, 2000); Petition for Reconsideration of the Satellite Industry Association (filed June 17, 2002); Petition for Reconsideration of the Satellite Industry Association (filed May 22, 2003).

[4] Multispectral Solutions, Inc. Comments in Response to Further Notice of Proposed Rule Making (filed July 21, 2003); Comments of the Short Range Automotive Radar Frequency Allocation Group (filed July 21, 2003).

[5] *See, e.g.,* Petition for Reconsideration of the Satellite Industry Association (filed May 22, 2003).

"low PRF UWB systems can have a higher potential for causing interference than . . . high PRF UWB systems."[7] Moreover, the mobility and potential ubiquity of such devices would compound their already considerable risk of harmful interference to FSS earth stations. Consequently, the Commission should not revisit its previous decision to exclude such uses from the 3.1-10.6 GHz band.

Furthermore, there is no basis in the record for reversing the Commission's reasoned conclusion to exclude vehicular radar from the 3.1-10.6 GHz band. Nothing in the record shows a need for additional spectrum for UWB vehicular radars, while the SIA has made substantial showings of the risk of harmful interference from such devices in the 3.1-10.6 GHz band. Moreover, given the early stage of UWB development and deployment, the real-life effects of UWB devices are still unknown. In view of this record and the uncertainty surrounding the effect of devices the Commission has already permitted in this band, it would be premature and imprudent for the Commission to expand the permissible uses of the band.

III. THE COMMISSION SHOULD NOT ELIMINATE PULSE DESENSITIZATION CORRECTION FACTORS.

In the MO&O and NPRM, the Commission proposes amending 47 C.F.R. § 15.35(b) to provide "an alternative standard for wideband Part 15 transmission systems."[8] Specifically, the Commission proposes that peak emissions comply with one of two criteria, the first of which provides that the measurement of the total peak emission level may include a pulse desensitization correction factor.[9] MSSI has argued that the Commission should go further, and

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[6] *Id.*

[7] MO&O and FNPRM at ¶154.

[8] *Id.* at ¶164.

[9] *Id.*

remove the requirement for pulse desensitization correction above 1 GHz.[10] The pulse desensitization factor is meant to correct for the practical difficulties of measuring total peak power of pulsed signals with a large spectral distribution and varying power levels across the spectrum. In this regard, SIA agrees that in most cases of interference into radiocommunications devices the receiver has a narrow noise or wanted signal bandwidth. Most FSS earth station receivers, however, employ low noise amplifiers with receiver bandwidths of 500 MHz or more. As a result, the Commission should move cautiously in its treatment of pulse desensitization factor and should ensure that permitted measurements of peak emissions take into account the characteristics of FSS earth station receivers. In particular, the Commission should not adopt MSSI's proposal for eliminating the pulse desensitization correction factor above 1 GHz at this early stage of UWB development, but should instead continue to incorporate pulse desensitization correction as an element of its first criteria for measuring total peak emissions levels for UWB devices.

IV. THE COMMISSION SHOULD ALLOW REDUCED BANDWIDTH UWB ON A CASE-BY-CASE BASIS.

In its Further Notice of Proposed Rule Making, the Commission proposes changing the definition of UWB devices to "permit the operation of any transmission system regardless of its bandwidth as long as it complies with the standards for UWB operation set forth in Subpart F of 47 CFR Part 15."[11] A number of commenting parties support elimination of the 500 MHz minimum bandwidth requirement. In principle, SIA does not oppose the elimination of the 500 MHz minimum bandwidth requirement if, in fact, it serves no useful purpose. However, because we are at the very beginning of UWB development and application, and the actual density of use

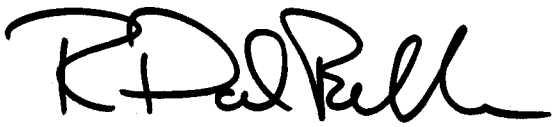
[10] Multispectral Solutions, Inc. Comments in Response to Further Notice of Proposed Rule Making (filed July 21, 2003)

and adverse effects of UWB devices remain uncertain, the risks of such sweeping definitional changes are heightened. In particular, SIA is concerned that removing the minimum bandwidth requirement will increase aggregate interference to FSS earth stations or satellite receivers from reduced bandwidth UWB devices. Consequently, rather than redefining UWB as it proposes, the Commission should allow reduced bandwidth exceptions on a case-by-case basis.

Finally, the Commission should continue to require that UWB systems spread emission densities over a large bandwidth in order to be consistent with the UWB concept. Thus, for UWB to remain distinct from such conventional communication techniques as BPSK, QPSK, FDMA and CDMA, the Commission should ensure that the bandwidth of UWB remains broad and quantifiable.

Respectfully submitted,

SATELLITE INDUSTRY ASSOCIATION



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[11] MO&O and FNPRM at ¶166.